



# 1/2" - Plenum Rated

**FLAME RETARDANT**

**Cable type :** 5129-PL

**Reference :** EC4-50-PL

Cable with UV resistant, low smoke  
flame retardant jacket according to UL-910 / NFPA 262  
CATVP rated (Plenum)

## CHARACTERISTICS

### Construction

<b>• Inner conductor</b>		
Material	copper clad aluminium wire	
Diameter (mm) (in)	4.8	(0.19)
<b>• Dielectric</b>		
Material	polyethylene	
Diameter (mm) (in)	11.8	(0.464)
<b>• Outer conductor</b>		
Material	corrugated copper tube	
Diameter (mm) (in)	13.8	(0.54)
<b>• Outer sheath</b>		
Thickness (mm) (in)	0.9	(0.035)
Diameter (mm) (in)	15.6	(0.61)

### Mechanical characteristics

<b>• Minimum bending radius</b>		
a) single bending (cm) (in)	12.5	(5.0)
b) 15 repeated bends (cm)	12.5	(5.0)
<b>• Maximum pulling strength (daN) (lb)</b>		
	100	(225)
<b>• Recommended temperature range</b>		
- Storage	<b>-15 to +85 °C (+5 to +185 °F)</b>	
- Installation	<b>-15 to +60 °C (+5 to +140 °F)</b>	
- Operation	<b>-15 to +85 °C (+5 to +185 °F)</b>	
<b>• Max. length per hoisting grip (m) (ft)</b>		
	70	(230)
<b>• Maximum hanger spacing (m) (ft)</b>		
	1	(3.3)
<b>• Flat plate crush res. (kg/mm) (lb/in)</b>		
	1.3	(75)
<b>• Bending moment (Nm) (lb-ft)</b>		
	6.0	(4.4)
<b>• Approximate weight (kg/m) (lb/ft)</b>		
	0.260	(0.176)

[1] The attenuation can be approximated by the formula:

$$\alpha(f[\text{MHz}]) = A \cdot \sqrt{f[\text{MHz}]} + B \cdot f[\text{MHz}] \quad (\text{dB}/100\text{m})$$

A = 0.207  
B = 0.00081

ISO  
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### Electrical characteristics

• Characteristic impedance ( $\Omega$ )	50 ± 1
• Nominal capacity (pF/m) (pF/ft)	76 (23.2)
• Relative propagation velocity (%)	88
• Inductance ( $\mu\text{H}/\text{m}$ ) ( $\mu\text{H}/\text{ft}$ )	0.189 (0.058)
<b>• DC-resistance at 20°C (68°F)</b>	
- inner conductor ( $\Omega/\text{km}$ ) ( $\Omega/1000\text{ft}$ )	1.48 (0.45)
- outer conductor ( $\Omega/\text{km}$ ) ( $\Omega/1000\text{ft}$ )	1.85 (0.56)
• RF peak voltage (kV)	1.5
• RF peak power (kW)	22.5
• Cut-off-frequency (GHz)	6.1
• Insulation resistance (M $\Omega$ .km)	>> 5000
<b>• Attenuation<sup>[1]</sup> and power rating</b>	

Frequency	Attenuation at 20°C (68° F) <sup>[2]</sup>		Mean power rating <sup>[3]</sup>	
	(MHz)	(dB/100m)		(dB/100ft)
10		0.66	0.201	16.2
20		0.94	0.287	11.4
30		1.16	0.354	9.26
80		1.92	0.585	5.60
100		2.15	0.655	4.99
150		2.66	0.811	4.04
200		3.09	0.942	3.47
300		3.83	1.17	2.80
400		4.46	1.36	2.40
450		4.76	1.45	2.26
500		5.03	1.53	2.13
600		5.56	1.70	1.93
700		6.04	1.84	1.78
800		6.50	1.98	1.65
894		6.91	2.11	1.55
960		7.19	2.19	1.49
1000		7.36	2.24	1.46
1500		9.23	2.81	1.16
1700		9.91	3.02	1.08
1800		10.2	3.12	1.05
1880		10.5	3.20	1.02
2000		10.9	3.32	0.99
2170		11.4	3.48	0.94
2200		11.5	3.50	0.93
2300		11.8	3.59	0.91
2400		12.1	3.68	0.89
2500		12.4	3.77	0.87
2700		12.9	3.95	0.83
3000		13.8	4.20	0.78
4000		16.3	4.98	0.66
6000		20.9	6.37	0.51

[2] Nominal values

[3] Ambient temperature = 40°C (104°F); temperature of inner conductor = 100°C (212°F);  
VSWR = 1.0; no solar loading